PTI Modification for Copper Tablet Precursor Process P131

BASF's copper tablet precursor process is permitted as Emission Unit (EU) P131 and consists of the following process operations: 1) raw powder feed, 2) mixing, 3) drying, 4) conveying, and 5) milling/blending. P131 was permitted under PTI P0115631 (effective June 23, 2015). PTI P0119072 was issued as an initial Chapter 31 Permit-to-Install (PTI) for the copper table precursor process. The terms of the PTI include a 1.51 lb/hr allowable particulate emission (PE) limit for all process operations combined based on OAC 3745-17-11(B); a 0.020 lb/MMBtu allowable PE limit for the natural gas combustion process MMBtu based on OAC 3745-17-10(B); and a 20 percent opacity limit, as a 6-minute average, from any stack serving the EU based on OAC 3745-17-07(A). In addition, the PTI established the following legally and practically enforceable emission limitations under OAC 3745-31-05(F) that require the use of control devices:

- The PM_{10} emissions from all process operations, combined, excluding the natural gas fuel combustion process, shall not exceed 0.14 lb/hr and 0.6 ton/year.
- The total chromium emissions from all process operations, combined, excluding the natural gas fuel combustion process, shall not exceed 0.14 lb/hr and 0.6 ton/year.

The PM_{10} and total chromium emission limitations were based on 100% capture and 99% control of emissions from the process. Through this PTI modification, BASF is requesting to revise the capture efficiency from 100% to 95%, while keeping the control efficiency at 99% (total control efficiency of 94%). This change will increase the requested PM_{10} and total chromium emission limitations as follows:

- The PM_{10} emissions from all process operations, combined, excluding the natural gas fuel combustion process, shall not exceed 0.26 lb/hr and 1.14 ton/year.
- The total chromium emissions from all process operations, combined, excluding the natural gas fuel combustion process, shall not exceed 0.17 lb/hr and 0.73 ton/year.
  Note – the material processed through this EU is not 100 percent chromium; therefore, the total chromium emission limit should not have been equal to the PM_{10} limit (see emission calculations for more information).

No other changes (e.g., throughput or natural gas consumption) are associated with this requested modification to the permit conditions for P131.